

VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A chemical sensor for detecting a quantity of a chemical, the chemical sensor comprising:

a [substrate] sensor element producing a measurable signal when activated;
and

a polymeric film disposed on the [substrate] sensor element, the polymeric film comprising at least one hardblock component and at least one softblock component, the polymeric film being capable of capturing a portion of the quantity of the chemical and inducing a measurable change in the signal, the change in the signal being relatable to the quantity of the chemical adjacent to the sensor element.

5. (Amended) A sensor according to claim 1, wherein the polymeric film comprises a component that [partitions] absorbs hydrocarbon vapor [as it enters the polymeric film] to a degree defined by a partition coefficient of the polymeric component with respect to the hydrocarbon vapor.

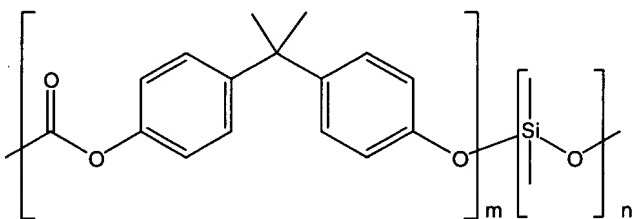
12. (Amended) A chemical sensor [according to claim 1] for detecting a quantity of a chemical, the chemical sensor comprising:

a [substrate] sensor element producing a measurable signal when activated;
and

a polymeric film disposed on the [substrate] sensor element, the polymeric film comprising at least one hardblock component and at least one softblock component, the polymeric film being capable of capturing a portion of the quantity of the chemical and inducing a measurable change in the signal, the change in the signal being relatable to the quantity of the chemical adjacent to the sensor element [.] ; wherein the sensor [comprises a sensor substrate, the sensor substrate]

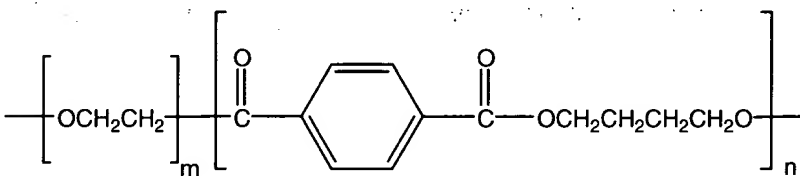
element comprises a quartz crystal microbalance (QCM) sensor that [is provided with] comprises an AT-cut quartz crystal substrate with gold (Au) electrodes.

14. (Amended) A sensor according to claim 1, wherein the polymeric film comprises:



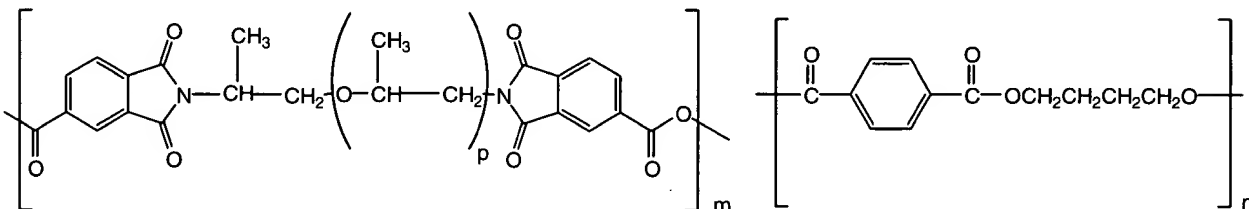
wherein m is in arrange from about 1 to about 4 and n is from about 3 to about 20.

15. (Amended) A sensor according to claim 1, wherein the polymeric film comprises:



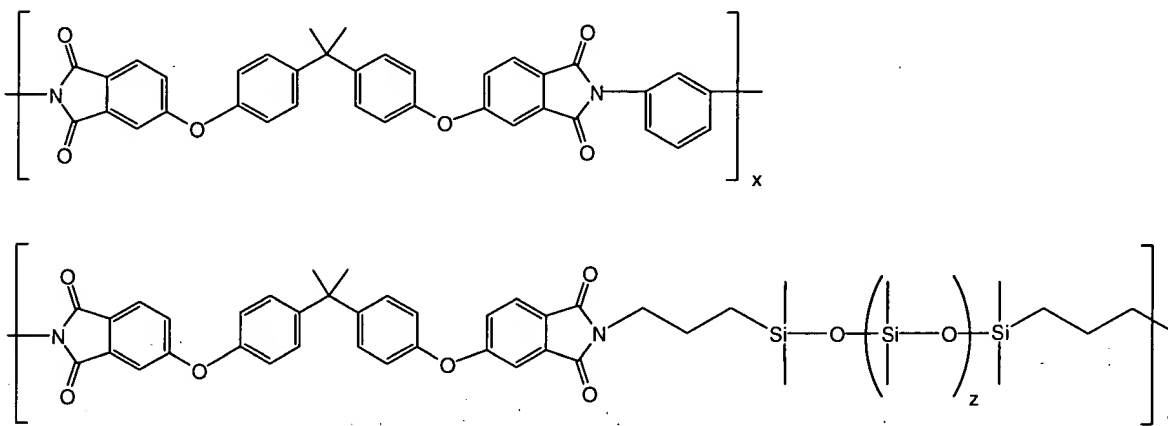
wherein m is in a range from about 10 to about 300 and n is in a range from about 5 to about 300.

16. (Amended) A sensor according to claim 1, wherein the polymeric film comprises:



wherein m is in a range from about 1 to about 60, p is in a range from about 10 to 200, and n is in a range from about 5 to about 300.

17. (Amended) A sensor according to claim 1, wherein the polymeric film comprises:



wherein x is in a range from about 1 to about 60, y is in a range from about 40 to 65, and z is in a range from about 3 to about 20.

33. (Amended) A method for enhancing detection of a target compound by a sensor, the method comprising:

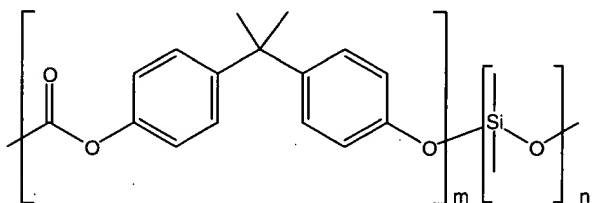
providing a sensor having a sensor element that produces a characteristic response when activated;

disposing a polymeric film on a surface of the sensor element, the polymeric film [adsorbs] being able to capture a quantity of the target compound and [changes] producing an enhanced change in the [operational sensitivity] characteristic response of the sensor element as a result of the capture of the target compound, wherein the polymeric film comprises [comprising] at least one hardblock component and at least one softblock component; and

relating the change in the characteristic response of the sensor element to a quantity of the target compound adjacent to the sensor element.

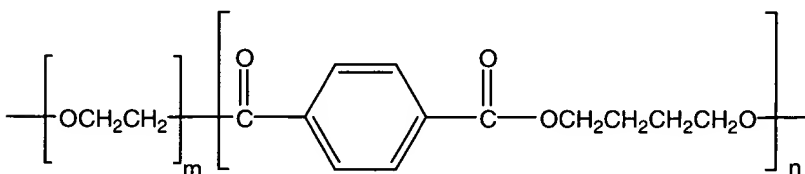
37. (Amended) A method according to claim 33, wherein the polymeric film comprises a component that [partitions] absorbs hydrocarbon vapor [as it enters the polymeric film] to a degree defined by a partition coefficient of the polymeric component with respect to the hydrocarbon vapor.

46. (Amended) A method according to claim 33, wherein the polymeric film comprises:



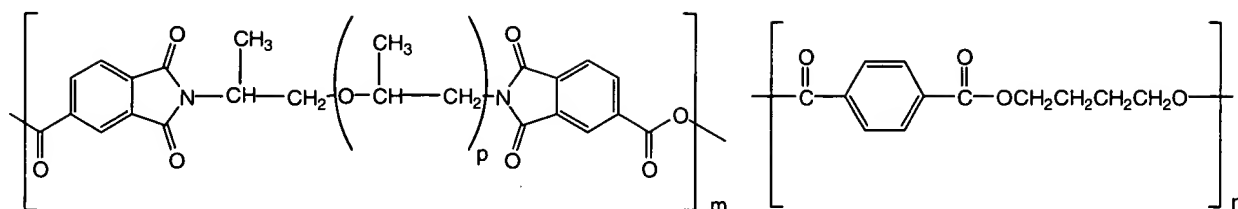
wherein m is in arrange from about 1 to about 4 and n is from about 3 to about 20.

47. (Amended) A method according to claim 33, wherein the polymeric film comprises:



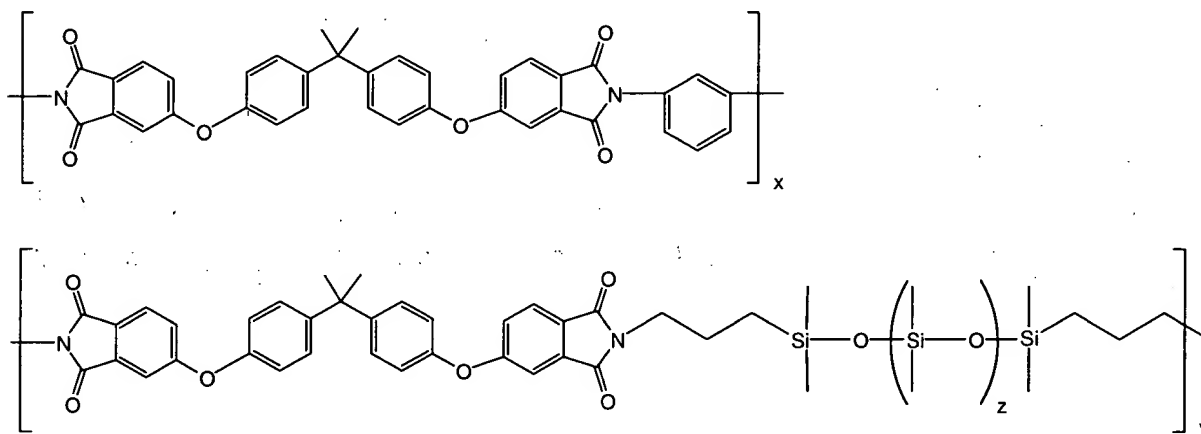
wherein m is in a range from about 10 to about 300 and n is in a range from about 5 to about 300.

48. (Amended) A method according to claim 33, wherein the polymeric film comprises:



wherein m is in a range from about 1 to about 60, p is in a range from about 10 to 200, and n is in a range from about 5 to about 300.

49. (Amended) A method according to claim 33, wherein the polymeric film comprises:



wherein x is in a range from about 1 to about 60, y is in a range from about 40 to 65, and z is in a range from about 3 to about 20.